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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/628,261	07/29/2003	Mamoru Kitamura	22040.00018-US	5425
30678	7590	10/17/2006	EXAMINER	
CONNOLLY BOVE LODGE & HUTZ LLP			LEE, SIU M	
P.O. BOX 2207			ART UNIT	
WILMINGTON, DE 19899-2207			PAPER NUMBER	
			2611	

DATE MAILED: 10/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/628,261

Applicant(s)

KITAMURA, MAMORU

Examiner

Siu M. Lee

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 2 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☒ Claim(s) 1 and 2 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/29/2003</u> , <u>5/16/2006</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following informalities:
Page 9, line 20, replace "**prier art**" with "**prior art**".
Appropriate correction is required.

Claim Objections

3. Claims 1 and 2 are objected to because of the following informalities:
(1) Regarding claim 1:
Claim 1, line 3, it is unclear which signal "**it**" is referring to. The examiner suggests replacing "**it**" with "**the pulse width modulation signal**".

(2) Regarding claim 2:

Claim 2, line 3, it is unclear which signal "it" is referring to. The examiner suggests replacing "it" with **"the pulse width modulation signal"**.

Appropriate correction is required.

Allowable Subject Matter

4. Claims 1 and 2 would be allowed if written to overcome the objection set forth in this office action.

5. The following is a statement of reasons for the indication of allowable subject matter: The present invention comprises the apparatus and method for audio reproduction. The apparatus comprises an amplification means comprised of a plurality of switching elements for amplifying the audio signal; a drive means for generating a drive control signal based on the pulse width modulation signal and controlling ON and OFF of the switching elements according to the drive control signal so as to drive the amplification means; and a compensation means for compensating a pulse width of the drive control signal by using a signal according to an offset voltage appeared in the amplification means due to variations in characteristics of the switching elements, and wherein the compensation means includes waveform formation means for dulling an edge of a pulse shape of the pulse width modulation signal; and comparison means for comparing the pulse width modulation signal of which edge is dulled by the waveform formation means to a threshold and outputting a pulse signal having the pulse width according to a comparison result and also rendering the threshold variable by using the

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signal according to the offset voltage. The closest prior art Holcombe (US 6,169,765 B1) disclose an apparatus and method for output signal pulse width error correction in a communications receiver comprises a low-pass filter (waveform formation means) coupled to the input terminal and produce a ramped signal having sloped edges responsive and a variable pulse width comparator (comparison means) configured to compare the ramped signal to a pulse width control voltage and produce a digital signal. However, Holcombe fails to disclose an amplification means comprised of a plurality of switching element for amplifying the audio signal; and drive means for generating a drive control signal based on the pulse width modulation signal and controlling ON and OFF of the switching elements according to the drive control signal so as to drive the amplification means; and a compensation means for compensating a pulse width of the drive control signal by using a signal according to an offset voltage appeared in the amplification means due to variations in characteristics of the switching elements. The distinct features have been added to claim 1, therefore, rendering it allowable.

Regarding claim 2, Holcombe fails to disclose the method of detecting or generating a signal according to an offset voltage of amplification means comprised of a plurality of switching elements and rendering the threshold variable by using the signal according to the offset voltage so as to compensate the pulse width of a drive control signal of the amplification means generated based on the pulse width modulation signal. The distinct features have been added to claim 2, therefore, rendering it allowable.

Conclusion

6. This application is in condition for allowance except for the following formal matters:

The objections as stated above.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Siu M. Lee whose telephone number is (571) 270-1083. The examiner can normally be reached on Mon-Fri, 7:30-4:00 with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on (571) 272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Siu M. Lee
10/11/2006



CHIEH M. FAN
SUPERVISORY PATENT EXAMINER